Acquiring Capabilities

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Current Situation
What We Need to Do Better

Requirements

- Adapting to changing conditions
- Matching operational needs with solutions
- Overcoming biases of Services and others
- Moving to transform military

PPBES

- Laying analytical foundation for budget
- Aligning budgets with acquisition decisions

Personnel and Readiness

- Treating people as a

Acquisition

- Acquiring systems-of-systems
- Making system decisions in a joint, mission context
- Transitioning technology
- Assessing complexity of new work and ability to perform it
- Controlling schedule and cost
- Passing operational tests
- Ensuring a robust industrial base

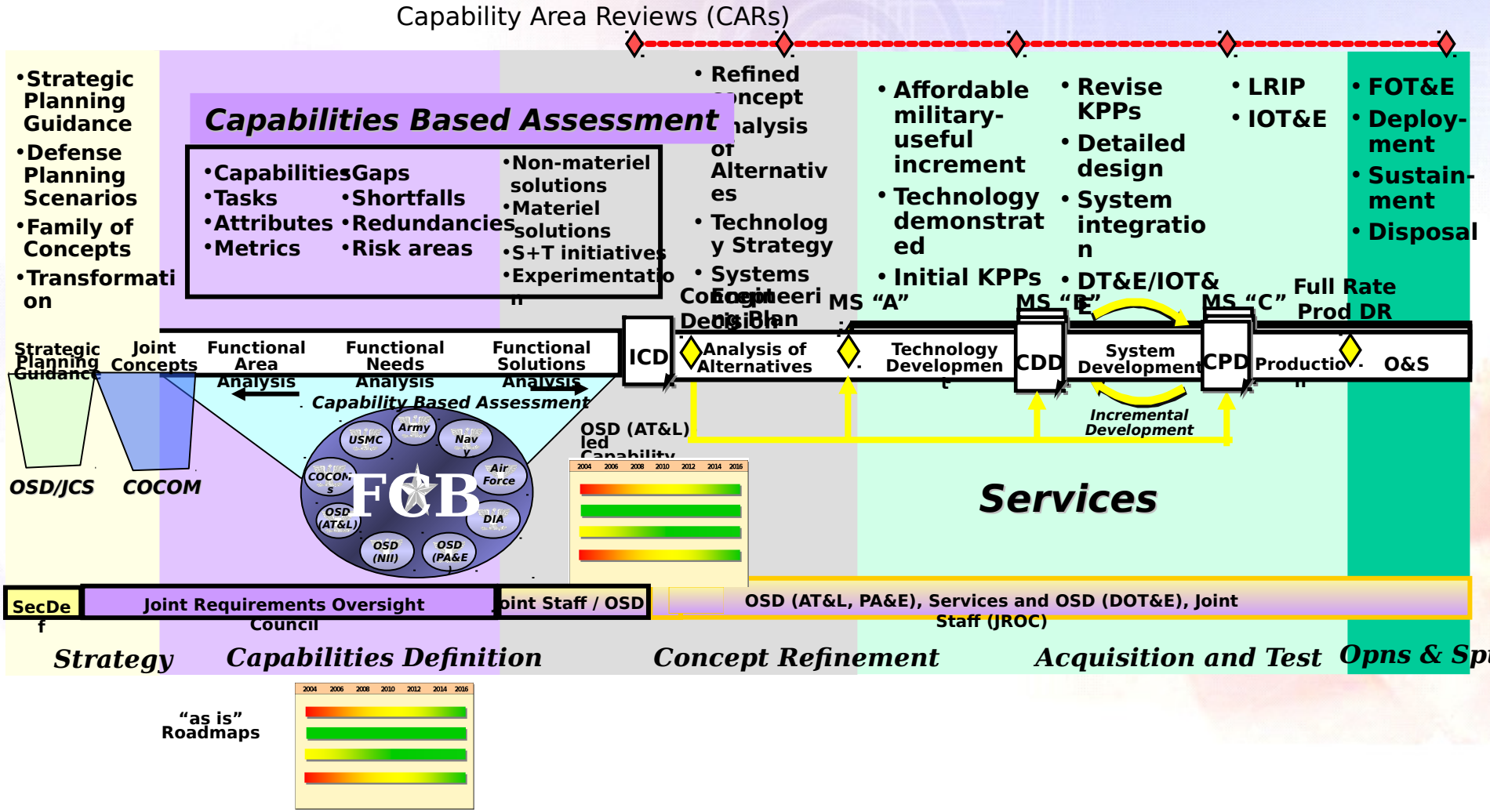
Sustainment

- Controlling O&S costs
- Reducing logistics tails

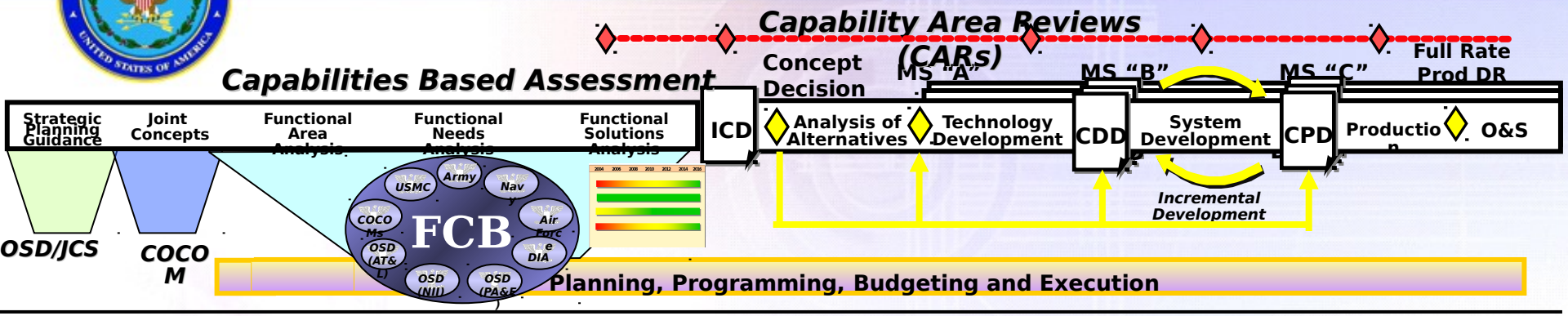
A Capabilities Approach to Acquisition

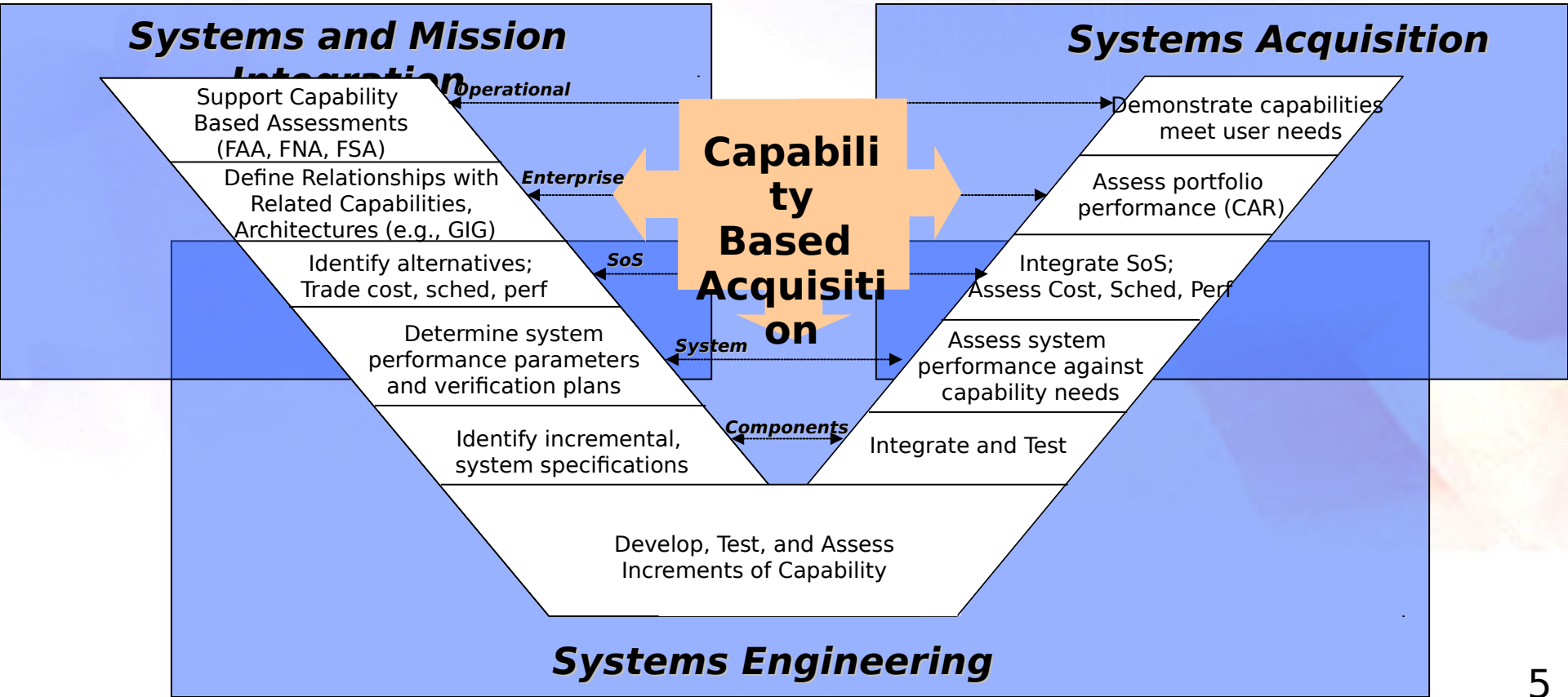
- **Extend focus beyond individual system acquisition**
- **Apply a capabilities-based approach**
  - **Make decisions on systems within a capabilities context**
  - **Engineer the relationships across the set of systems that together satisfy the need**
  - **Synchronize the interaction among FoS/SoS to satisfy multiple capabilities**
- **Influence other key Department processes**
  - **Shape strategic guidance**
  - **Inform development of joint concepts and requirements**
  - **Balance programming guidance**

DoD End-to-End Capabilities Based Planning Process



Acquisition Engagement





Key Activity: Capability Area Reviews

USD(AT&L), as DAE, leads reviews of select capability areas to:

- **Provide mission area context – from a top-down perspective**
- **Implement capability-based methodology on provider side**
- **Link policy, capability generation, acquisition, and budget processes**
- **Identify joint solutions and added work to be done (across DOTMLPF)**
- **Reveal need for management, engineering, and testing across an area**
- **Help align individual program expectations**
- **Provide basis to set metrics and gauge progress over time**
- **Assess the cumulative effect of individual program decisions**

Key Activity: Roadmaps and Roadmapping

Roadmaps provide a framework for decision making – prompt discussion, inform decisions, and capture decisions made

- **Lay out Department's strategic plan considering:**
  - **Materiel and non-materiel solutions**
  - **Capability that only exists at Family/System-of-Systems level**
  - **What to expect from each system**
  - **Cross-cutting management, engineering, and testing**
  - **Network enablers**
  - **Affordability**
- **Nature of Roadmaps will vary by topic**
- **Start with the "as is" and show where we want to go**

But… must balance decisions across capability areas

Key Activity: System Decisions in Context

Supporting Platforms:

Hosting Platforms
LHA/D

Weapons:
.50 cal/7.62 mm Guns
2.75” Rockets
Hellfire

Replacing:
OH-58D

Net Centric Warfare:
IDM
BFT
Have Quick
SATCOM
SINCGARS
JTRS (Cluster 1)
Link-16 (w/JTRS)

Air Complementary Platforms:
C-17A
C-130J
C-5
AH-64
UH-60
CH-47
A2C2S

Ground Complementary Platforms
Land Warrior
M-1 Tank
M-2 Bradley
Fire Support
Stryker
FCS

ISR:
JSTARS
AWACS
GPS
AMPS
ARCS

Armed Reconnaissance Helicopter

Current schedule and performance support fielding

Performance issues with interface

Performance and schedule coordination required for future systems

SOLID DENOTES CURRENT SYST
DASH DENOTES FUTURE SYSTE

Capability Area: FORCE APPLICATION
Roadmaps: Army Aviation Modernization Plan
MOSA Rating: Satisfactory

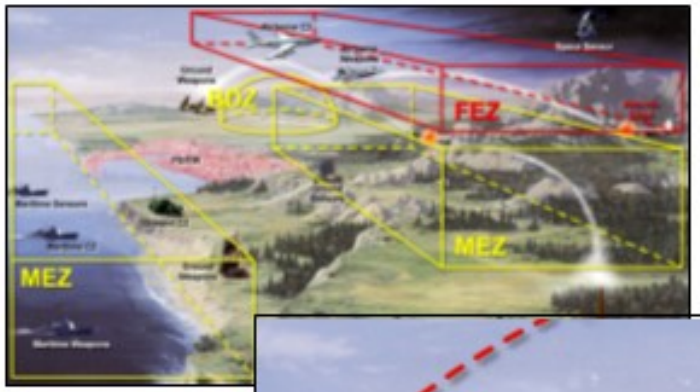
Arrow to ARH denotes receiving other program’s technology or capability
Arrow from ARH denotes technology or capability

OSD DAES Rating: C S P Not Rated Fielded

System-of-Systems (SoS) Systems Acquisition Functions

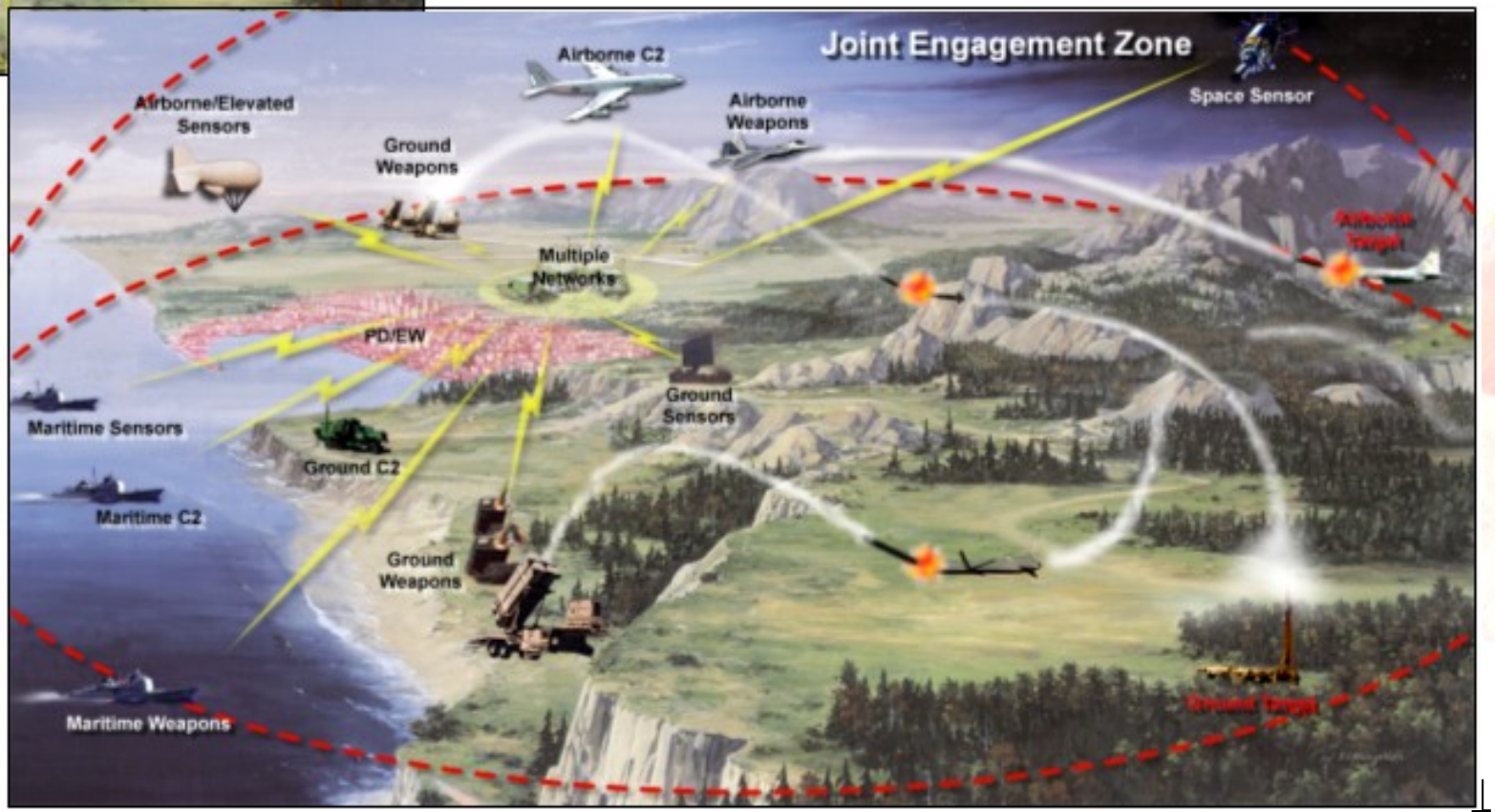
- **Align expectations of AT&L, the Joint Staff and the Services for joint capability to be fielded over time (requirements, etc)**
- **Synchronize efforts/programs across the Services to produce the desired capabilities (e.g., development activities, testing)**
- **Conduct systems engineering and integration across Service and joint programs to ensure interoperability**
- **Develop and execute properly phased and focused test and evaluation plans for SoS components and overall joint capability**
- **Establish mechanism for allocating resources among component programs and activities – including making needed tradeoffs**
- **Coordinate activities in all the DOTMLPF areas, to create the enablers associated with fielding a**

SoS Example: Integrated Air and Missile Defense Challenges



2010 Joint Engagement Zone

- Single Integrated Air Picture
- Combat ID
- Integrated Fire Control
- Automated Battle Management Aids



SoS Example: Integrated Air and Missile Defense Roadmap

As of 1 Apr 04

Capabilities

Systems

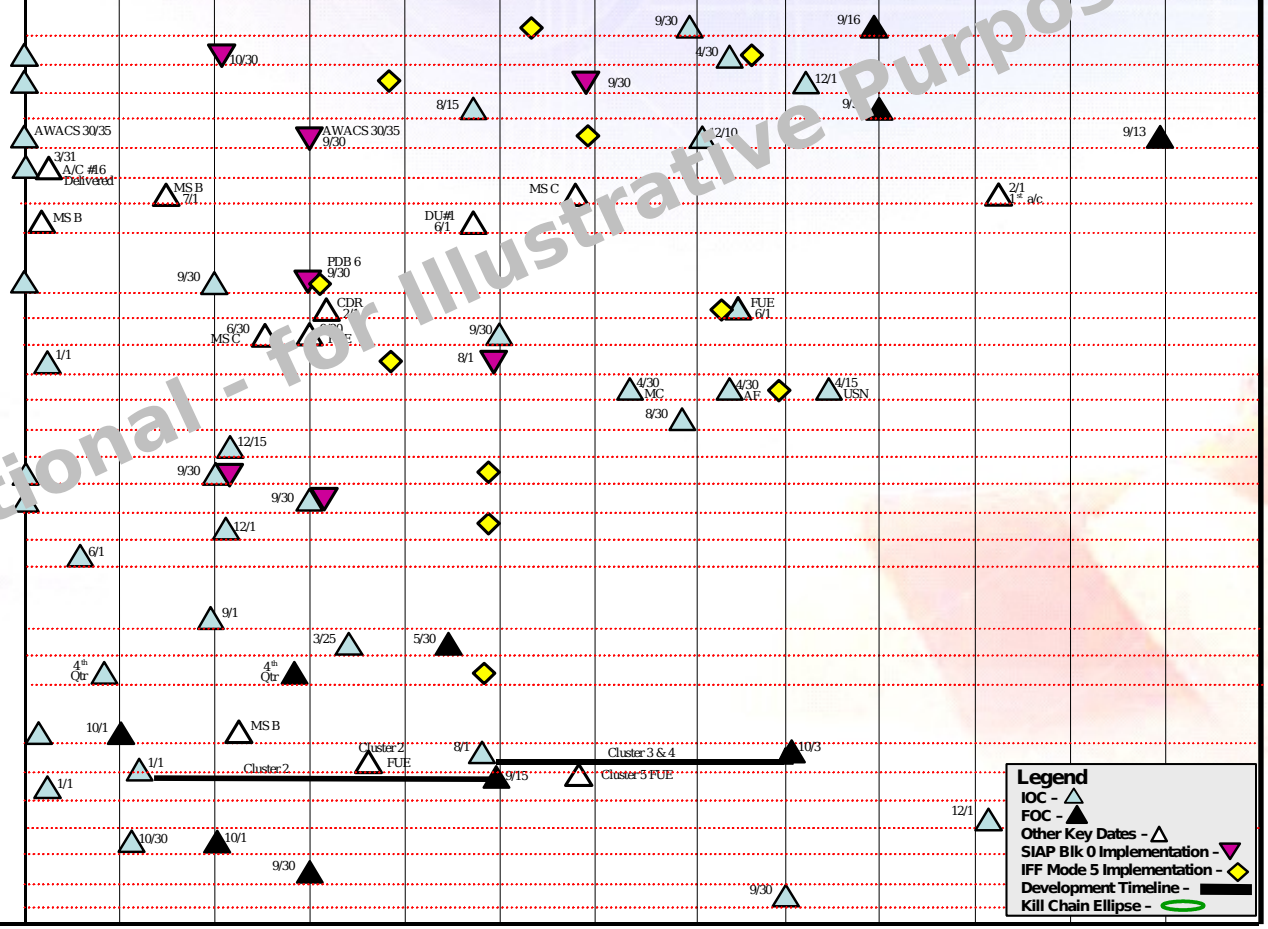
FY	04	05	06	07	08	09	10	11	12	13	14	15	16
Critical Asset Defense													
Limited Area Defense													
Theater Area Defense													

Sensors:
- JLENS
- E-2
- AEGIS
- MRRS (GATORS Inc 1)
- E-3 (AWACS 30/35 - 40/45)
- E-8 (JSTARS)
- E-10
- MP-RTIP

Weapons:
- PAC-3 (PATRIOT)
- MEADS
- SLAMRAAM
- F/A-18 (MIDS)
- F-35
- ERAM/SM6
- CLAWS
- F-15 (Suite 5M)
- F-16 (40/42)
- F/A-22
- AIM-120 (C-7)

Battle Management:
- AMDC2 (Block 1)
- CAC2S
- AOC

Networks/C2:
- CEC
- JTRS
- MIDS (F/A-18)
- T-SAT
- GIG-BE
- DoD Teleport
- NCES



*Version 1

Current Challenges

- **Plan for a budget constrained environment and impact on potential solutions – new vs. re-engineered vs. DOTMLPF**
- **System complexity and interdependency is increasing – Family of Systems and System of Systems interdependencies**
- **Balancing joint needs with cost and schedule**
- **Demand for network centric capability drives higher levels of program coordination**
- **Development of capabilities that do not fit well in current management structures**
- **Effective application of systems engineering to streamline acquisition process and meet performance objectives**
- **Maintaining an expert workforce, trained for the above challenges**